



DEFENSE ADVANCED TRAFFIC MANAGEMENT COURSE

LOGISTICS OVER THE **SHORE OPERATIONS**

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DATMC #2-00

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MILITARY CARGO DISCHARGE **OPERATIONS**

**THE MOVEMENT OF CARGO ON or OFF VESSEL
CAN BE.....**

PIER SIDE

IN THE STREAM

OFF SHORE



PIERSIDE SIDE DISCHARGE

**CARGO DIRECTLY ONTO PIER
FROM THE VESSEL.**

**MOST EFFECTIVE USE OF
PERSONNEL AND
EQUIPMENT**



**FASTEST DISCHARGE
RATE**



“IN THE STREAM” DISCHARGE

**VESSEL ANCHORED IN PROTECTED
WATERS**

**CARGO DISCHARGE
ONTO “LIGHTERAGE.”**



WHY????

- **INSUFFICIENT OR DAMAGED PIERS**
- **CHANNEL PIER-SIDE WATER DEPTHS
ARE TOO SHALLOW FOR VESSELS.**



OFF- SHORE DISCHARGE

**VESSEL ANCHORED
OFFSHORE IN
UNPROTECTED
WATERS
VULNERABLE TO THE
EFFECTS OF WEATHER**

**MOST INTENSE
COMMITMENT OF
PERSONNEL & EQUIPMENT**

**SLOWEST DISCHARGE
RATE**



**LEAST EFFECTIVE
METHOD**



A DEFINITION OF “LOTS” FROM FM

55-50.

**ANY VESSEL DISCHARGE OPERATION OTHER
THAN ONE CONDUCTED AT A FIXED PORT.**

**INCLUDES ANY VESSEL DISCHARGE OPERATION
WHERE THE VESSEL IS DIRECTLY DISCHARGED
TO OTHER THAN LAND/LAND TRANSPORTATION.**

**INCLUDES VESSEL DISCHARGE TO LIGHTERAGE
AND SUBSEQUENTLY DISCHARGES OVER THE
SHORE.**

WHY LOTS..... ?

**AUSTERE THEATER WITH NON-EXISTENT
PORT FACILITIES** 

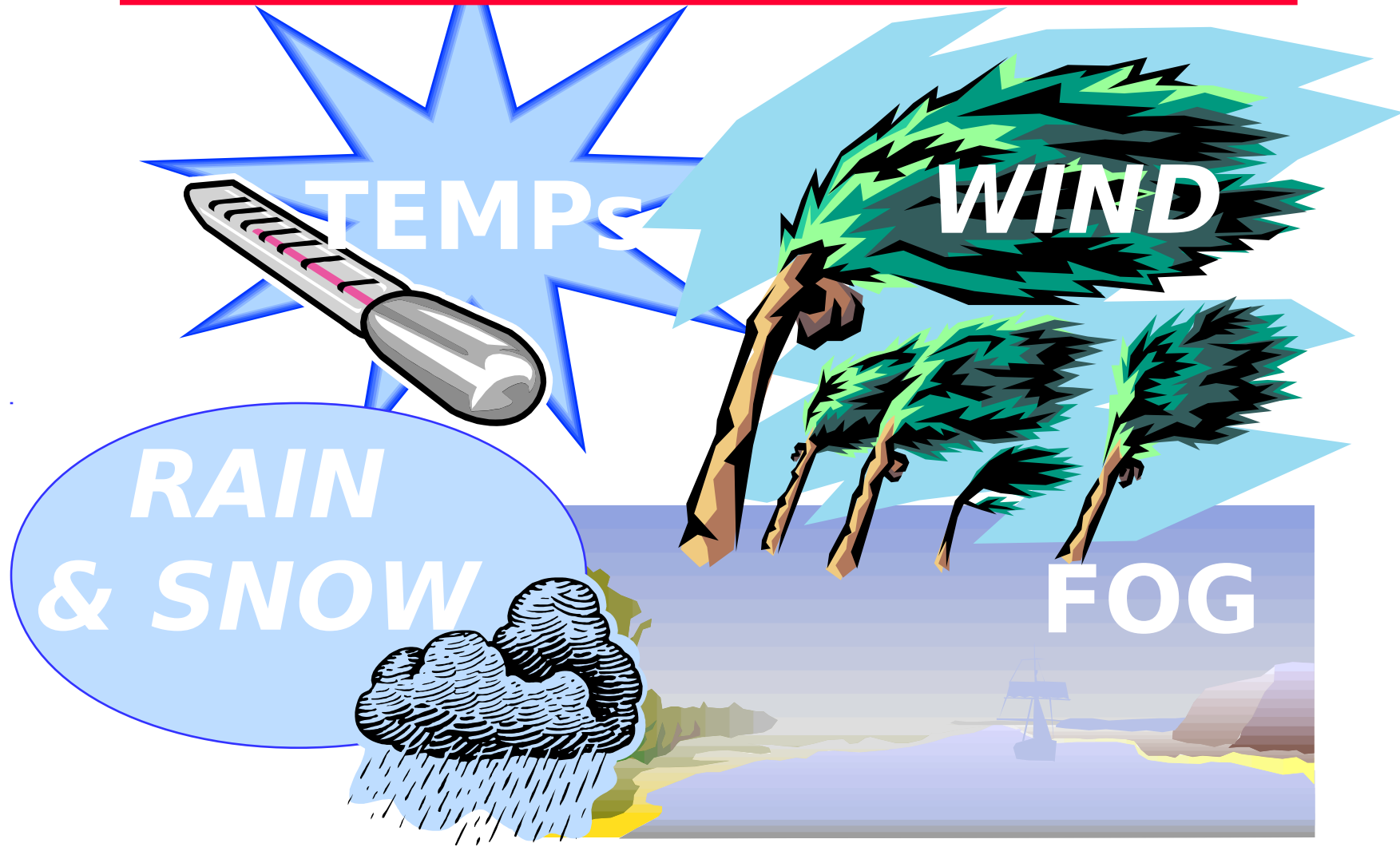
**TO AUGMENT INADEQUATE
EXISTING FIXED PORT FACILITIES** 

**EXISTING PORTS DENIED BECAUSE
OF ENEMY ACTION** 

SHORTEN LINES OF COMMUNICATION 



EFFECTS OF WEATHER



ALL SIGNIFICANTLY LIMIT "LOTS" OPERATIONS!

**WHILE WE'RE AT IT, LET'S
LOOK AT SOME OF THE
SEALIFT VESSELS..
LIKE THE.....**

**FAST SEALIFT SHIP
(FSS)**



**THE FSS SHIP IS A “RO/R
- COMBINATION” SHIP.**

**A CLASS OF 8 CONTAINER
SHIPS CONVERTED TO
TO MILITARY USE**

FAST SEALIFT SHIP

CAN TRANSPORT 1,100 VEHICLES

ALTHOUGH A RO/RO, THEY CAN TRANSPORT CONTAINERS AFT.

RAMP CAPACITY IS 65 L/TONS



**RAMP CAN BE
USED ON EITHER SIDE
ALLOWS
DISCHARGING TO BE
ACCOMPLISHED
.... EVEN IN LOTS
OPERATIONS**



**CAN BE RO/RO
OR “LO/LO”**

**LO/LO USES
THE SHIP’S
“HAGGLUNDS”
CRANES**

**THE HAGGLUNDS CRANE
IS USED TO LOAD AND
DISCHARGE CONTAINERS
AS WELL AS VEHICLES OR
OUTSIZED CARGO**



**RO/RO CAN OCCUR TO PIERSIDE OR
ONE SIDE OF THE VESSEL,
WHILE....**



**WHILE LO/LO OPERATIONS
CAN BE LOADING TO
LIGHTERAGE
ON THE OTHER!**



LARGE MEDIUM SPEED RO/RO (LMSR)

5



14 NEW CONSTRUCTION



✓ ☒ SLEWING STERN RAMP

✓ ☒ SINGLE PEDESTAL TWIN CRANES

✓ ☒ WIDE RAMP (MID-SECTION)

✓ ☒ EMERGENCY HELO PAD

LARGE MEDIUM SPEED **RO/RO SHIP (LMSR)**

**VESSEL DESIGNED TO FULFILL THE SHORTFALL
OF 2 MILLION SQUARE FEET IN THE SEALIFT
PROGRAM**

**THE LMSR HAS AN
AVERAGE OF
350 THOUSAND
SQ FT**



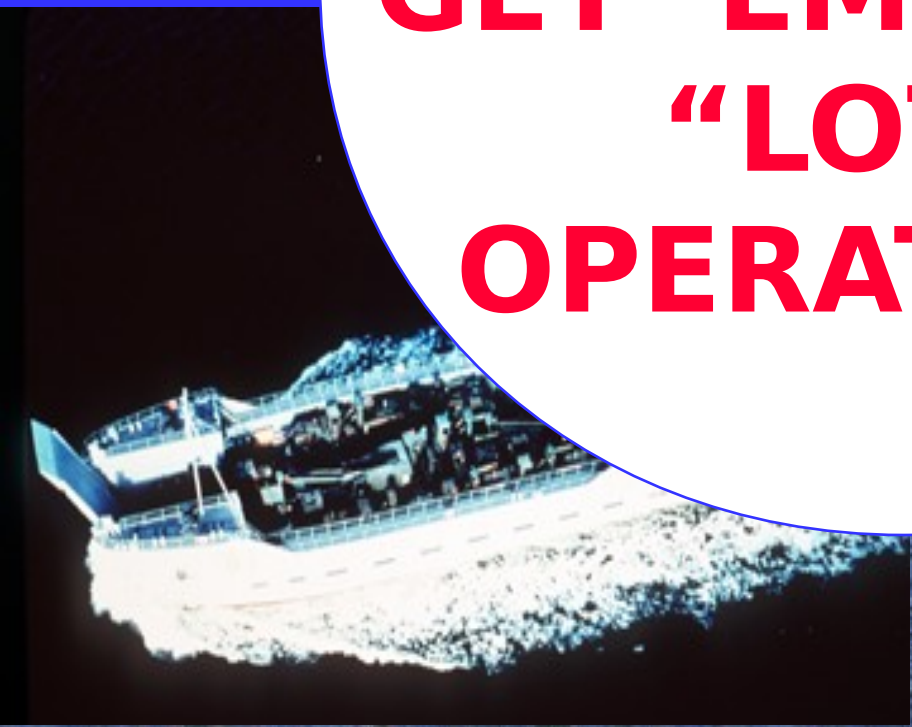
**USED EXTENSIVELY FOR THE
ARMY PREPOSITIONED AFLOAT PROGRAM.**

LMSR **CHARACTERISTICS**



- **LOA 954 FT**
- **BEAM 105 FT, 10 IN**
- **DRAFT 37 FT**
- **RAMPS PORT / STBD
SIDE,
STERN**
- **SPEED 24 KNOTS**

**.....AND
HOW DO WE
GET 'EM TO THE
“LOTS”
OPERATION??**



**....ON A
“FLO-FLO”
SHIP, OF
COURSE!!**



..... HOW'S THAT WORK??

ELEVATED CAUSEWAY

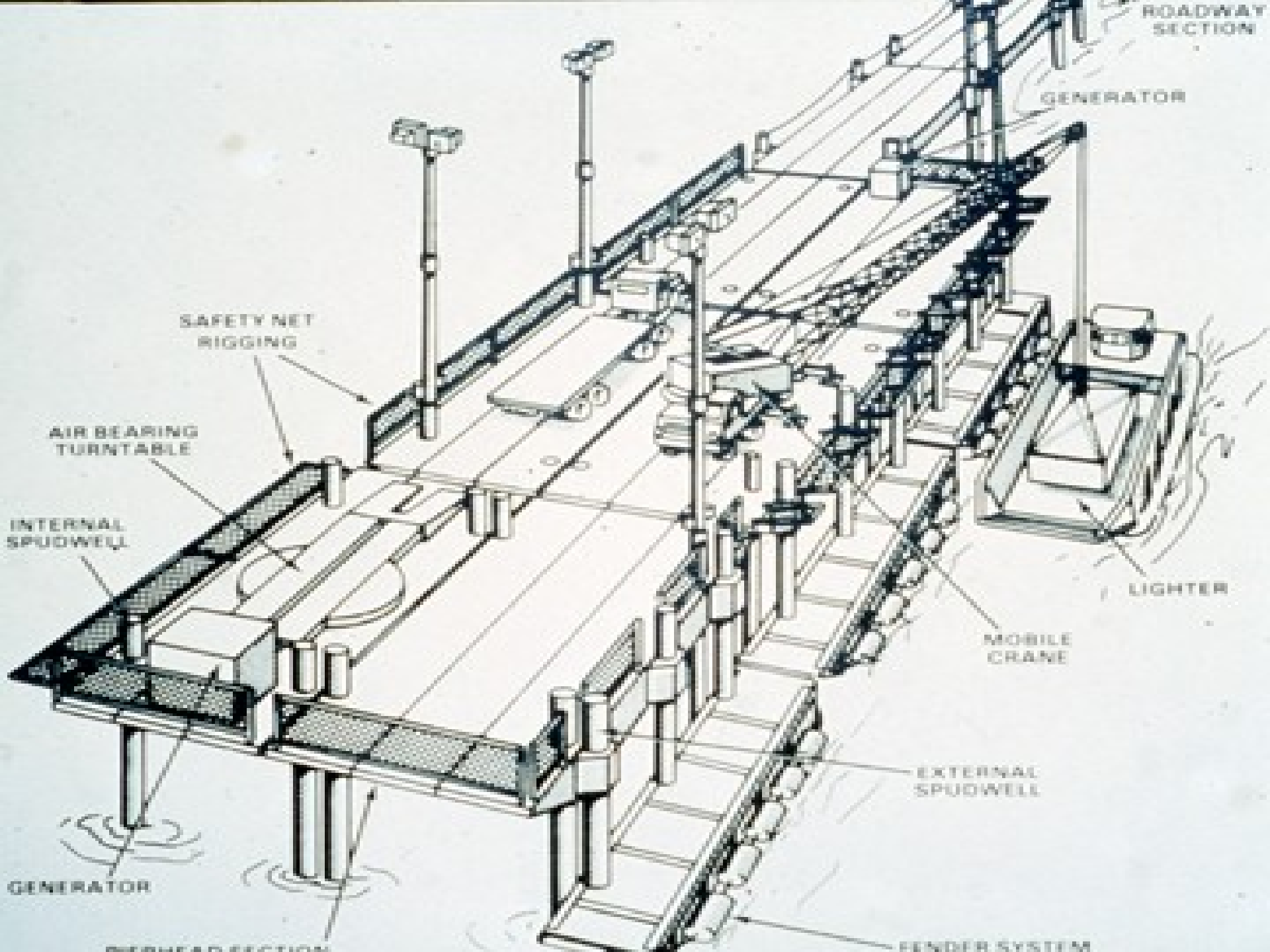


**RAPIDLY INSTALLED
PIER FACILITY**

**USED FOR “BARE
BEACH” OPERATION**

**FEATURES AIR
BEARING TURNTABLE**

**OWNED/OPERATED BY THE
NAVY.**









ROLL ON/ ROLL OFF DISCHARGE FACILITY

**THE “RRDF” PROVIDES AN OPEN OCEAN
INTERFACE BETWEEN OCEAN GOING
VESSELS AND CRAFT WHOSE DRAFT &
CONFIGURATION ALLOW FOR BEACH
OPERATIONS**

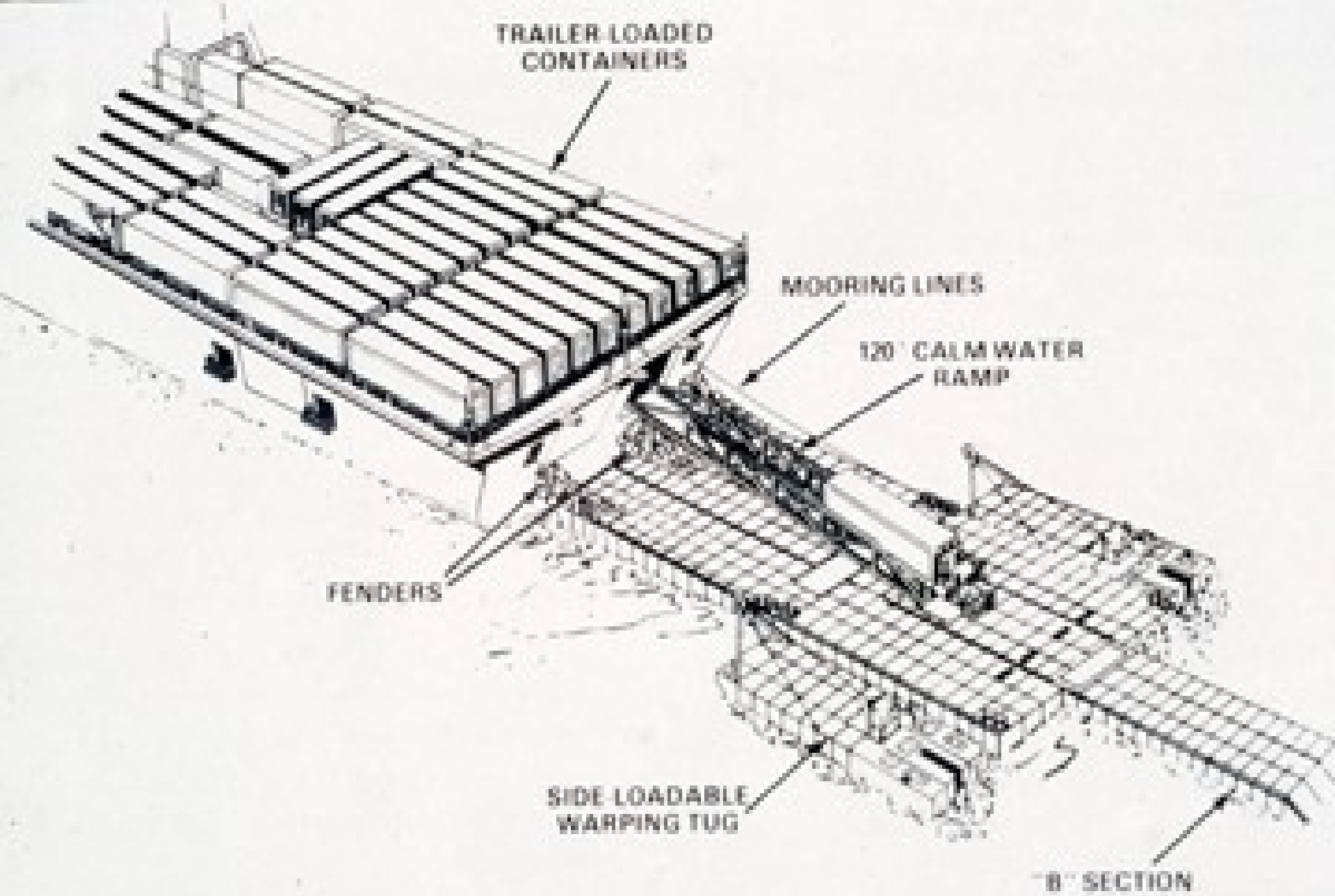


Figure 1-3. RORO discharge facility with ramp at stern port.



**CRAFT WHOSE DRAFT &
CONFIGURATION ALLOW
CAN MATE TO THE RRDF,
BE LOADED & DEPART FOR
THE BEACH**





**PLACED IN POSITION AS NEEDED
BY SLWT OR OTHER CRAFT**









CAUSEWAY FERRY

**THE CAUSEWAY FERRY ALLOWS FOR
MOVEMENT VEHICLES, BREAKBULK,
AND CONTAINERIZED CARGO FROM
OCEAN-GOING VESSELS**







SIDE LOADABLE WARPING TUGS





FLOATING CAUSEWAY (FC)

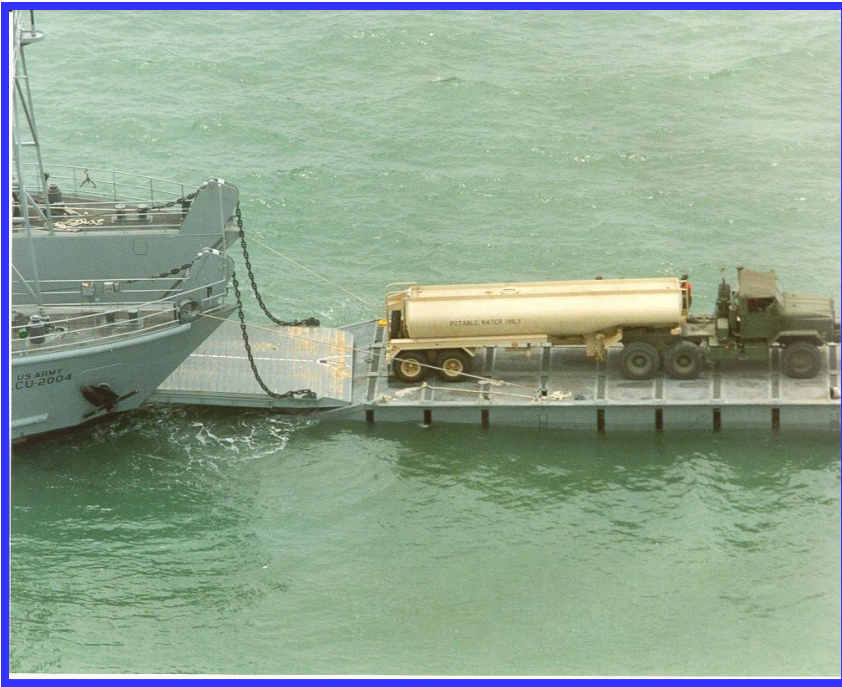
**THE FLOATING CAUSEWAY IS A FLOATING
PIER THAT CAN BE CONFIGURED UP TO
229 METERS LONG**

**THE “FC” PROVIDES A “DRY BRIDGE” FOR
THE MOVEMENT OF VEHICLES FROM LIGHTER
TO SHORESIDE LOG FACILITIES**

**SIDE LOADING WARPING TUGS”
POSITION THE CAUSEWAY AND
SECURE THE ANCHORS**

**EXTENDS FROM HIGH WATER
LINE INTO THE SURF ZONE**





**OFFSHORE END ALLOWS THE
LIGHTERS TO DIRECTLY
DISCHARGE TO THE ROADWAY**

**SHORESIDE END ALLOWS
DISCHARGE TO BEACH**

**ANCHOR MOORING SYSTEM
ENSURES THE CAUSEWAY
IS SECURED**





THE SYSTEM IS MODULAR

**APPROXIMATELY THE
SAME DIMENSIONS AS
A STANDARD 40-FOOT
CONTAINER**

**THE MODULAR CAUSEWAY
SECTIONS ARE THEN
CONNECTED**



MODULAR, AND BOLTED TOGETHER



TYPICAL LOTS TASK FORCE

**TERMINAL
GROUP**

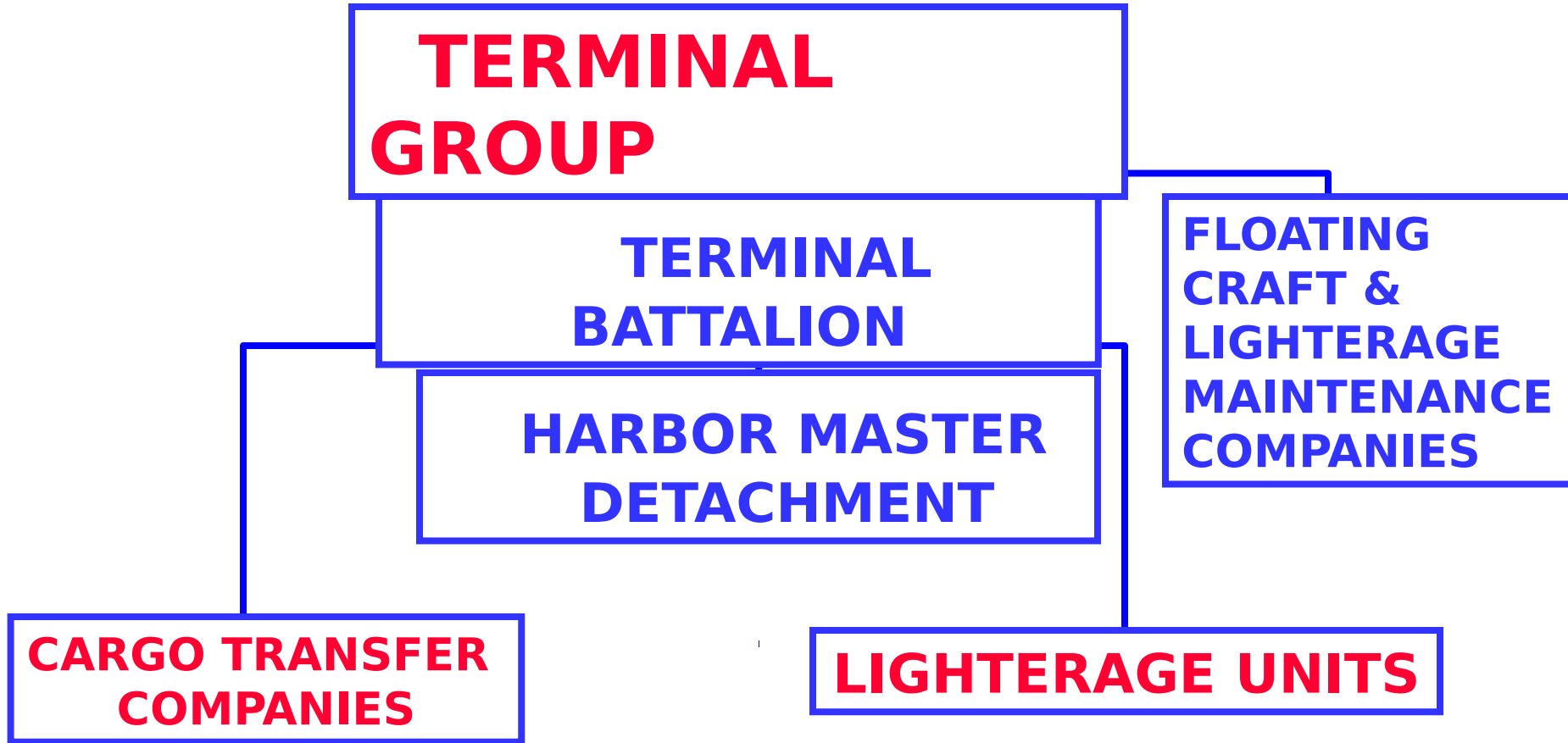
**TERMINAL
BATTALION**

**HARBOR MASTER
DETACHMENT**

**FLOATING
CRAFT &
LIGHTERAGE
MAINTENANCE
COMPANIES**

**CARGO TRANSFER
COMPANIES**

LIGHTERAGE UNITS



CARGO TRANSFER COMPANY

IT'S PURPOSE IS TO DISCHARGE, LOAD, AND TRANS-SHIP CARGO AT AIR, RAIL, OR TRUCK, AND WATER TERMINALS INCLUDING LOTS OPERATIONS.



CARGO TRANSFER COMPANY

THE CARGO TRANSFER COMPANY IS THE BASIC WORKING UNIT IN THEATER WATER TERMINAL OPERATIONS

FOR BREAK-BULK CARGO. IT IS ORGANIZED TO WORK A SINGLE SHIP ON A TWO SHIFT, AROUND THE CLOCK BASIS. AT FULL STRENGTH, OPERATING ON A TWO SHIFT BASIS, OR ON TWO SHIP ON A ONE SHIFT BASIS AT PIERS OR OVER BEACHES, WITH 75 PERCENT AVAILABILITY OF EQUIPMENT.

A CARGO TRANSFER COMPANY CAN DISCHARGE 1,000 SHORT TONS (STONS) OF CARGO A DAY, OR CAN LOAD 500 ST OF CARGO A DAY IN A FIXED PORT ENVIRONMENT

CARGO TRANSFER COMPANY



APOE/APOD



**SEAPORT
(RO-RO)**



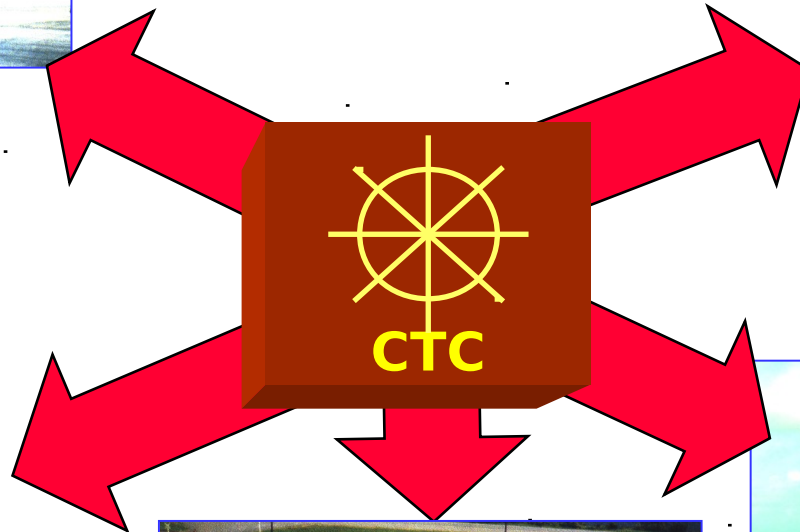
**SEAPORT
(LO-LO)**



RAILHEAD



**LOGISTICS-OVER-
THE-SHORE**





SUMMARY of KEY POINTS

**LOTS IS REQUIRED WHERE LIMITED OR NO FIXED
PORT FACILITIES EXIST OR ARE DAMAGED.**

**WHEN CONDUCTING LOTS OPERATIONS, WEATHER IS
A CRITICAL FACTOR.**

**EFFECTIVE APPLICATION OF LIGHTERAGE IS KEY TO
ENSURE AN EFFECTIVE THROUGHPUT.**

**LOTS ARE THE MOST LABOR INTENSIVE
AND DEMANDING PORT OPERATIONS TO
CONDUCT**



DEFENSE ADVANCED TRAFFIC MANAGEMENT COURSE

LOGISTICS OVER THE **SHORE OPERATIONS**